



ATES ENVIRONMENTAL PROTECTION AGENCY

May 4, 2017

Mr. Anthony R. Brown
Environmental Manager
Atlantic Richfield Company
4 Centerpointe Drive, LPR 4-435
La Palma, California 90623-1066

Re: EPA Approval of Atlantic Richfield's (ARC) On-Property Focused Remedial Investigation Work Plan Amendment No. 11, Supplement No. 1 and Supplement No. 2 to the Task Sampling and Analysis Plan for Surface Water/Groundwater Interaction at Upper Leviathan Creek, Leviathan Mine Site, Alpine County, California, dated April 13, 2017 and April 19, 2017

Dear Mr. Brown:

EPA has completed its review of the two supplements to On-Property Focused Remedial Investigation Work Plan Amendment No. 11, Supplement No. 1 and Supplement No. 2 to the Task Sampling and Analysis Plan for Surface Water/Groundwater Interaction at Upper Leviathan Creek, Leviathan Mine Site, Alpine County, California, dated April 13, 2017 and April 19, 2017. This work was submitted to EPA pursuant to Administrative Order for Remedial Investigation and Feasibility Study, Leviathan Mine, Alpine County, California (CERCLA Docket No. 2008-18, June 23, 2008).

- Supplement No. 1 (April 13, 2017) proposes to install and monitor ten drive point piezometers, install and monitor continuous *water level measuring devices in one drive point piezometer set, install a flume or weir approximately 100 feet downstream of SW-03 to measure surface water flow (location SF-04), and perform slug tests in the shallow drive point piezometers to evaluate shallow groundwater flux*
- Supplement No. 2 (April 19, 2017) requests to extend monitoring activities in to the 2017 field season. ARC anticipates that the 2017 hydrologic conditions along Leviathan Creek may be different than those observed during the 2016 field season.

Background

In 2010, ARC submitted the Focused Remedial Investigation (FRI) Work Plan (On-Property FRI Work Plan; Atlantic Richfield, 2010). On December 9, 2010 EPA conditionally approved the On Property FRI Work Plan with comments and direction.

On September 20, 2015 ARC provided a Sampling Plan describing work identified in Subsection 5.2.4.3 of the Focused Remedial Investigation (FRI) Work Plan (On-Property FRI Work Plan; Atlantic Richfield, 2010). The TSAP described activities associated with the investigation of ponding of low pH water located adjacent to Leviathan Creek upstream and adjacent to the toe of the Landslide.

On January 22, 2016 EPA provided comments. On February 22, 2016 ARC provided the Draft Final Amendment.

On February 26, 2017 EPA provided approval for ARC to proceed with the work as outlined. And requested that ARC install nested drive point piezometers at four or more locations along the west bank of Leviathan Creek during the 2016 field season.

On April 13, 2017 ARC submitted a proposal to install and monitor ten drive point piezometers, install and monitor continuous *water level measuring devices in one drive point piezometer set, install a flume or weir approximately 100 feet downstream of SW-03 to measure surface water flow (location SF-04), and perform* slug tests in the shallow drive point piezometers to evaluate shallow groundwater flux

On April 19, 2017 ARC submitted a proposal for supplemental monitoring activities to:

- manually monitor groundwater and surface water levels at, and directly adjacent to, 36 drive point piezometer locations (Delta Seep to just below Aspen Creek confluence),
- collect continuous water level measurements using pressure transducers at 13 drive point piezometer and surface water locations (Acidic Pond to Aspen Creek confluence),
- collect samples twice (once before beaver dam removal and once after removal) for field parameter measurements and laboratory analysis at 10 drive point piezometer locations and 3 surface water locations (Acidic Pond to Aspen Creek confluence).

EPA has completed its review of Amendment No. 11, Supplement No. 1 dated April 13, 2017 and provides the following comments:

- **Please clarify the location and rationale for SF-04:** Figure 2 appears to indicate that the location is within the concrete portion of Leviathan Creek. Please provide rationale as to why the location was selected.
- **Coordinate Sampling Events for Supplement 1 and 2:** EPA requests that ARC conduct at least one sampling event for both Supplement No. 1 and No. 2 concurrently; to provide a snapshot of the surface water/groundwater interaction and interconnectedness for a larger reach of Leviathan Creek

EPA has completed its review of Amendment No. 11, Supplement No. 2 dated April 19, 2017 and provides the following comments

- **Include Delta Seep Sampling:** Please add water quality sampling at established locations near the Delta Seep (i.e. DPZ-43, DPZ-44, DPZ-34, and SW-10). The increase of precipitation may also affect the hydrology of this source and the groundwater/surface

water interactions in addition to the locations near the acidic pond and dams to be removed.

EPA approves ARC's request for this additional work, to continue surface water/groundwater interaction monitoring and sampling during the 2017 field season subject to the requests above. Please collect and analyze for field parameters and laboratory analytes per the previously approved Amendment No. 11 TSAP.

ARC shall include and fully assess all 2017 Amendment 11 results in the Site Characterization report due to EPA on December 31, 2017. This will provide for identifying whether additional sampling is recommended to close any data gaps to prepare the RI report due to EPA on June 30, 2018.

If you have any questions, please feel free to contact me at (415) 972-3003 or deschambault.lynda@epa.gov

Sincerely,

A handwritten signature in cursive script that reads "Lynda Deschambault". The ink is dark and the signature is fluid, with a large initial 'L'.

Lynda Deschambault
Remedial Project Manager

Cc by electronic Email:

Michelle Hochrein, Washoe Tribe of Nevada and California
Douglas Carey, California Regional Water Quality Control Board, Lahontan Region
David Friedman, Nevada Department of Environmental Protection
Kenneth Maas, United States Forest Service
Tom Maurer, United States Fish and Wildlife Service
Toby McBride, United States Fish and Wildlife Service
Steve Hampton, California Department of Fish and Wildlife
Marc Lombardi, AMEC